

REMARKS

Claims 1-11, 21, 22 and 25-28 are pending in this application.

Claims 1 and 22 have been amended by the present Amendment. Amended claims 1 and 22 do not introduce any new subject matter.

REJECTIONS UNDER 35 U.S.C. § 102

Reconsideration is respectfully requested of the rejection of claims 1, 3-9 and 21 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 6,660,332 ("Kawase '332").

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." Verdegaal Bros. v. Union Oil Co. of California, 814 F.2d 628, 631, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1987). "The identical invention must be shown in as complete detail as is contained in the . . . claim." Richardson v. Suzuki Motor Co., 868 F.2d 1226, 1236, 9 U.S.P.Q.2d 1913, 1920 (Fed. Cir. 1989); M.P.E.P. § 2131.

Applicants respectfully submit that Kawase '332 does not disclose or suggest a pitch between neighboring spraying nozzles that is substantially identical to a multiple of the shift distance, whereby the pitch is greater than the shift distance, as recited in amended claim 1.

Kawase '332

The Examiner maintains that Kawase '332 discloses spraying nozzles having a nozzle pitch (L/n) which equals a shifting distance (scanning distance δ) divided by $\cos\theta$. The Examiner refers to the equation in col. 3 of Kawase '332, which reads:

$$\delta = (L/n)\cos \theta.$$

L/n does not represent the pitch. As stated in col. 3, lines 28-41 and shown in Fig. 1, L/n represents the length of a nozzle group, where L is the length of a nozzle line and n is the number of nozzle groups.

Accordingly, the cited equation does not deal with a pitch between nozzles.

Moreover, Kawase '332 teaches a pitch between nozzles which is less than shift distance. See, e.g., Kawase '332, Fig. 1. In contrast, the pitch of the claimed embodiments is greater than (e.g. a multiple of) the shift distance. See Applicants' disclosure, Fig. 4.

Accordingly, Kawase '332 does not teach the features of claim 1.

Therefore, Applicants respectfully submit that claim 1 is not anticipated by Kawase '332. In addition, for at least the reason that claims 3-9 and 21 depend from claim 1, claims 3-9 and 21 are also not anticipated by the cited reference.

Therefore, Applicants respectfully request that the Examiner withdraw the rejection of claims 1, 3-9 and 21 under 35 U.S.C. § 102(b) and that claims 1, 3-9 and 21 are in condition for allowance.

REJECTIONS UNDER 35 U.S.C. § 102/103

Reconsideration is respectfully requested of the rejection of claims 1, 3-11 and 21 under 35 U.S.C. § 102(b) as being anticipated by European Patent Application Pub. No. EP 0754553 ("EP '553), or in the alternative, under 35 U.S.C. § 103(a) as obvious over EP '553 in view of Kawase '332 or U.S. Patent No. 6,579,139 ("Mishima").

Applicants respectfully submit that EP '553 does not disclose or suggest a pitch between neighboring spraying nozzles that is substantially identical to a multiple of the shift distance, whereby the pitch is greater than the shift distance, as recited in

amended claim 1. Therefore, Applicants respectfully submit that claim 1 is not anticipated by EP '553.

EP '553

The Examiner states that EP '553 is capable of having a multiple of the shift distance of the head units which is identical to the pitch because the distance between the nozzles depends on the desired pixels formed on the substrate. August 19, 2005 Office Action at 4-5.

In contrast to the claimed embodiment, EP '553, like Kawase '332, teaches a pitch between nozzles which is less than shift distance. See, e.g., EP '553, Fig. 19.

Furthermore, the conclusion that the device is "capable of having a multiple of the shift distance of the head units which is identical to the pitch" does not logically follow from "the distance between the nozzles depending on the desired pixels formed on the substrate". One of ordinary skill in the art could not arrive at such a conclusion without the benefit of hindsight.

Accordingly, EP '553 does not teach the features of claim 1.

Since EP '553 does not disclose or suggest the limitations recited in independent claim 1, Applicants respectfully submit that independent claim 1 is not anticipated by EP '553. Claims 3-11 and 21 depend from claim 1 which, for the reasons stated hereinabove, is submitted not to be anticipated by the cited reference. For at least those very same reasons, claims 3-11 and 21 are also submitted not to be anticipated by the cited reference.

With respect to the obviousness rejection based on EP '553 and Kawase '332, Applicants refer the Examiner to the above arguments made in connection with Kawase

'332.

With respect to the obviousness rejection based on EP '553 and Mishima, Applicants note the following.

Mishima

The Examiner maintains that Mishima discloses a pitch between nozzles that is equal to a multiple of a shift distance (integer times of the element interval). August 19, 2005 Office Action at 5.

However, the element interval in Mishima is not equal to a shift distance. In contrast, the element interval is the distance between electrode elements. The nozzle pitch is the same as electrode element interval so that a droplet 9 of a solution containing a material for forming a conductive film is dropped on the correct position between the electrode elements 2 and 3. See Fig. 19C. The pitch of the nozzles in Mishima has nothing to do with shift distance, and instead is based on the electrode element interval so that the conductive film for connecting each set of element electrodes 2 and 3 is dropped in the right place. In other words, the nozzles in Mishima are lined up over the electrode elements according to the electrode element interval.

Accordingly, Mishima does not teach the features of claim 1.

Based on the foregoing, Applicants respectfully submit that claim 1 is not anticipated by EP '553 and is patentable over EP '553 in view of Kawase '332 and Mishima. For at least the reason that claims 3-11 and 21 depend from claim 1, claims 3-11 and 21 are also submitted not to be anticipated by EP '553 and to be patentable over EP '553 in view of Kawase '332 or Mishima.

Therefore, Applicants respectfully request that the Examiner withdraw the

rejection of claims 1, 3-11 and 21 under 35 U.S.C. § 102(b) and the alternative rejections of claims 1, 3-11 and 21 under 35 U.S.C. § 103(a) and that claims 1, 3-11 and 21 are in condition for allowance.

Reconsideration is respectfully requested of the rejection of claims 1-9, 21-22 and 25-28 under 35 U.S.C. § 102(a) as being anticipated by U.S. Patent Application Publication No. US2003/0186613 ("Kawase '613"), or in the alternative, under 35 U.S.C. § 103(a) as obvious over Kawase '613 in view of Kawase '332 or Mishima.

Applicants respectfully submit that Kawase '613 does not disclose or suggest a pitch between neighboring spraying nozzles that is substantially identical to a multiple of the shift distance, whereby the pitch is greater than the shift distance, as recited in amended claim 1; or the pitch being substantially identical to n times a predetermined shift distance, wherein n is an integer greater than 1, as recited in amended claim 22. Therefore, Applicants respectfully submit that claims 1 and 22 are not anticipated by Kawase '613.

Kawase '613

As with EP '553, the Examiner states that Kawase '613 is capable of having a multiple of the shift distance of the head units which is identical to the pitch because the distance between the nozzles depends on the desired pixels formed on the substrate. August 19, 2005 Office Action at 6-7.

As argued with respect to EP '553, the conclusion that the device is "capable of having a multiple of the shift distance of the head units which is identical to the pitch" does not logically follow from "the distance between the nozzles depending on the desired pixels formed on the substrate". One of ordinary skill in the art could not arrive

at such a conclusion without the benefit of hindsight.

Furthermore, the stated objective of Kawase '613 is to avoid overlap at ejection start and end points. See Kawase '613, ¶¶ 0131-0132. Avoidance of overlap is obtained by the shifted configurations, shown in, for example, Figs. 3 and 4 of Kawase '613. There is no motivation to have pitch between nozzles that is greater than the shift distance because such a configuration results in the overlap that Kawase '613 seeks to avoid.

In contrast to the claimed embodiments, Kawase '613 teaches a pitch between nozzles which is less than shift distance. See, e.g., Figs. 3 and 4. Indeed, Kawase discourages a small shift size, which is required to result in a pitch that is greater than a shift distance. See Kawase, '613, ¶¶ 0135-0136 (stating that shift distance should be greater than 0.1 mm and preferably at least 0.3 mm).

Accordingly, Kawase '613 does not teach the features of claims 1 and 22.

Therefore, Applicants respectfully submit that claim 1 and claim 22 are not anticipated by Kawase '613. Moreover, for at least the reason that claims 2-9 and 21 depend from claim 1, and claims 25-28 depend from claim 22, claims 2-9, 21 and 25-28 are also submitted not to be anticipated by Kawase '613.

With respect to the obviousness rejection based on Kawase '613 and Kawase '332, Applicants note that arguments made above with respect to Kawase '332 also apply to the instant rejection.

With respect to the obviousness rejection based on Kawase '613 and Mishima, Applicants note that arguments made above with respect to Mishima also apply to the instant rejection.

Based on the foregoing, Applicants respectfully submit that claims 1 and 22 are not anticipated by Kawase '613 and are patentable over Kawase '613 in view of Kawase '332 and Mishima. For at least the reason that claims 2-9 and 21 depend from claim 1, and claims 25-28 depend from claim 22, claims 2-9, 21 and 25-28 are also submitted not to be anticipated by Kawase '613 and to be patentable over Kawase '613 in view of Kawase '332 or Mishima.

Therefore, Applicants respectfully request that the Examiner withdraw the rejection of claims 1-9, 21-22 and 25-28 under 35 U.S.C. § 102(a) and the alternative rejections of claims 1-9, 21-22 and 25-28 under 35 U.S.C. § 103(a) and that claims 1-9, 21-22 and 25-28 are in condition for allowance.

REJECTIONS UNDER 35 U.S.C. § 103(a)

Reconsideration is respectfully requested of the rejection of claims 10-11 under 35 U.S.C. § 103(a) as being unpatentable over (1) Kawase '332 as applied to claim 9 and further in view of EP '553; and (2) Kawase '613 alone or in view of Kawase '332 or Mishima as applied to claim 9 and further in view of EP '553.

Applicants respectfully submit that Kawase '332 when taken alone or in combination with EP '553, and Kawase '613 when taken alone or in combination with Kawase '332 or Mishima and EP '553, fail to teach or suggest a pitch between neighboring spraying nozzles that is substantially identical to a multiple of the shift distance, whereby the pitch is greater than the shift distance, as recited in amended claim 1.

As stated above, neither Kawase '332 nor Kawase '613 teach this feature. Further, as stated above, the addition of EP '553 or Mishima does not render the

claimed embodiment obvious.

Therefore, it is respectfully submitted that the cited references, when taken alone or in combination, do not disclose or suggest the recited features of claim 1. Accordingly, it would not have been obvious to modify Kawase '332, as applied to claim 9 and further in view of EP '553, or to modify Kawase '613, when taken alone or in view of Kawase '332 or Mishima as applied to claim 9 and further in view of EP '553, to develop the embodiment recited in claim 1.

As such, Applicants respectfully submit that amended claim 1 is patentable over (1) Kawase '332 as applied to claim 9 and further in view of EP '553; and (2) Kawase '613 alone or in view of Kawase '332 or Mishima as applied to claim 9 and further in view of EP '553.

For at least the reason that claims 10-11 depend from claim 1, claims 10-11 are also submitted to be patentably distinct over the cited references.

Therefore, Applicants respectfully request that the Examiner withdraw the rejections of claims 10-11 under 35 U.S.C. § 103(a) and that claims 10-11 are in condition for allowance.

An early and favorable reconsideration is earnestly solicited. If the Examiner has any further questions or comments, the Examiner may telephone Applicants' Attorney to reach a prompt disposition of this application.

Respectfully submitted,



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